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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,618	02/19/2004	Hans Ulrich Frutschi	003-116	3164
36844	7590	08/26/2004	EXAMINER	
CERMAK & KENEALY LLP P.O. BOX 7518 ALEXANDRIA, VA 22307			TRIEU, THAI BA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/780,618

Applicant(s)

FRUTSCHI, HANS ULRICH

Examiner

Thai-Ba Trieu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

The preliminary Amendment filed on February 19, 2004 is acknowledged. Claims 1-20 were amended, and claims 21-22 were added.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119 (a)-(d), which papers have been placed of record in the file.

This application is in condition for allowance except for the following formal matters:

1. IN THE ABSTRACT:

Applicant is required to submit a substitute abstract to meet the requirement set forth below:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to **a single paragraph on a separate sheet within the range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. IN THE SPECIFICATION:

a. Applicant is required to insert the following paragraph on Page 1, after the title "Method for operating a partially closed turbocharged... for carrying the method":

The present application claims priority to Germany Patent Application No. 103 07 374.4 filed on February 21, 2003, which is incorporated herein by reference.

b. Applicant discloses "The object is achieved by the combination of features described ***of claims 1 and 12***" (Page 3, lines 8-9); however, claims may be amended or cancelled during the prosecution of the instant application, and therefore, is not an appropriate achievement of the invention. Applicant should rephrase or rewrite these lines.

3. IN THE CLAIMS:

Applicant is suggest to correct minor informalities in the claims for the consistency of the whole specification and claims:

1. Claim 1 should be replaced by the following:

-- A method for operating a partially closed, turbocharged gas turbine cycle, the method comprising:

- burning fuel in a combustion chamber while supplying a gaseous, compressed working medium, which contains combustion air to generate hot combustion gases;

- expanding a working medium, which contains the hot combustion gases in a turbine of a gas turbine, said turbine performing work;
 - extracting heat from the expanded working medium in a downstream recuperator, to generate cooled working medium;
 - compressing the cooled working medium in a compressor of the gas turbine;
 - feeding heat to the compressed working medium in the recuperator before said compressed working medium re-enters the combustion chamber;
 - removing a portion of the expanded working medium on a low-pressure side of the recuperator at a removal location which is at a first temperature level, and further expanding said removed expanded working medium portion in the turbine a ~~[[first]]~~ **second** exhaust-gas turbocharger;
 - sucking in and compressing air with a compressor the ~~[[first]]~~ **second** exhaust-gas turbocharger; and
 - feeding the compressed air to the working medium on ~~[[a]]~~ **the** low-pressure side of the recuperator at a feed location, which is at a second temperature level *(for avoiding double recitation)*;
- wherein said gas turbine compressor comprises a radial compressor. --

2. Claim 2 should be replaced by the following:

-- The method as claimed in claim 1, wherein said gas turbine, comprises a ~~[[second]]~~ **first** exhaust-gas turbocharger.--

3. Claim 4 should be replaced by the following:

-- The method as claimed in claim 1, further comprising:

expanding said removed expanded working medium portion in the turbine of the ~~[[first]]~~ **second** exhaust-gas turbocharger so that the power required to drive the compressor of the ~~[[first]]~~ **second** exhaust-gas turbocharger is produced.--

4. Claim 5 should be replaced by the following:

-- The method as claimed in Claim 1, wherein the quantity of air supplied to the working medium by the compressor of the ~~[[first]]~~ **second** exhaust-gas turbocharger at least covers the demand for combustion air in the combustion chamber.--

5. Claim 8 should be replaced by the following:

-- The method as claimed in Claim 1, further comprising:

controlling the rotational speed of the ~~[[first]]~~ **second** exhaust-gas turbocharger with an auxiliary machine connected to the ~~[[first]]~~ **second** exhaust-gas turbocharger to set the level of turbo charging.--

6. Claim 9 should be replaced by the following:

-- The method as claimed in Claim 1, further comprising:

controlling the rotational speed of the ~~[[first]]~~ **second** exhaust-gas turbocharger with an adjustable bypass between the compressor and the turbine of the ~~[[first]]~~ **second** exhaust-gas turbocharger in order to set the level of turbo charging.--

7. Claim 12 should be replaced by the following:

-- A gas turbine system useful for carrying out the method ms claimed in claim 1, the system comprising:

a generator;

Common shafts;

a gas turbine having a compressor and a turbine, which drive the generator via the common shaft, the turbine having an entry and an exit
[[.]] ;

a recuperator having a high-pressure side and a low-pressure side
[[,and]] ;

a combustion chamber having an exit connected to the entry to the turbine of the gas turbine, the compressor having an exit, a fuel feed, and being configured and arranged to receive combustion air from the exit of the compressor of the gas turbine via the high-pressure side of the recuperator, the exit of the turbine and the entry to the compressor of the

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gas turbine, being connected via the low-pressure side of the recuperator;
and

a ~~[[first]]~~ **second** exhaust-gas turbocharger configured and arranged to suck in air, including a compressor having an exit and a turbine having an entry the ~~[[first]]~~ **second** exhaust-gas turbocharger being connected to locations , of the low-pressure side of the recuperator by the exit of the compressor of the ~~[[first]]~~ **second** exhaust-gas;

wherein the compressor of the gas turbine, comprises a radial compressor.--

8. Claim 13 should be replaced by the following:

-- The gas turbine system as claimed in claim 12, wherein the gas turbine, comprises a ~~[[second]]~~ **first** exhaust-gas turbocharger .

9. Claim 16 should be replaced by the following:

-- The gas turbine system as claimed in Claim 12, wherein the ~~[[first]]~~ **second** exhaust-gas turbocharger is configured and arranged to be driven by an auxiliary machine.--

10. Claim 17 should be replaced by the following:

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-- The gas turbine system as claimed in Claim 12, further comprising a bypass valve arranged between the exit from the compressor and the entry to the turbine of the ~~[[first]]~~ **second** exhaust-gas turbocharger.--

11. Claim 20 should be replaced by the following:

-- The gas turbine system as claimed in Claim 18, wherein the mass flow in the ~~[[first]]~~ **second** exhaust-gas turbocharger is approximately a quarter of the mass flow in the ~~[[second]]~~ **first** exhaust-gas turbocharger and the third exhaust-gas turbocharger is configured and arranged for approximately half the volumetric flow of the gas turbine.

Conclusion

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Mackay (US Patent Number 6,526,757 B2) discloses a multi pressure mode gas turbine.

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- Nakhamkin (US Patent Number 5,778,675) discloses a method of power generation and load arrangement with hybrid mode of operation of a combustion turbine derivative power plant.

- Faulkner et al. (US Patent Number 5,488,823) discloses a turbocharger bleed air driven fuel gas booster system and method.

- Nakhamkin (US Patent Number 5,347,806) discloses a cascaded advanced high efficiency multi shaft reheat turbine with inter-cooling and recuperation.

- Malohn (US Patent Number 5,323,603) discloses an integrated air cycle gas turbine.

- Malohn (US Patent Number 5,212,942) discloses a cogeneration system with recuperated gas turbine engine.

- Mowill (US Patent Number 5,081,832) discloses a high efficiency twin spool radial high-pressure gas turbine engine.

- Tieberg et al. (US Patent Number 4,392,809) disclose a method and plant for recovering heat from smoke gases.

- Fono (US Patent Number 3,107,482) disclose a method of and means for conveying gaseous fluids over long distances.

- Pfenninger (US Patent Number 2,758,827) discloses a gas turbine plant for use in metallurgical works.

- Hermitte et al. (US Patent Number 2,633,707) disclose a compound plant for producing mechanical power and heating with gas and steam turbines.

- Loy (US Patent Number 2,621,475) discloses an operation of multistage combustion gas turbines.

- Traupel (US Patent Number 2,513,601) discloses a gas turbine plant.


- Sedille (US Patent Number 2,584,232) discloses a gas turbine power plant, including means to treat combustion products between successive stages of expansion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
August 26, 2004



Thai-Ba Trieu
Patent Examiner
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